

IN THE CLAIMS

Claims 1-21 (Canceled).

22. (New) A call routing device comprising:

interface circuitry for the exchange of signals with a first telephony device, the interface circuitry capable of receiving from the first telephony device both voice and non-voice signals;

a host device communicatively coupled to the interface circuitry;

at least one network interface capable of communicating via at least one of a conventional switched telephone network and a packet network, the at least one network interface communicatively coupled to the host device; and

the host device having stored thereon operational software and a database, the database having at least one entry comprising predefined call routing information and at least one associated destination address, the database for use in the routing of voice calls from the first telephony device to a second telephony device, via the at least one network interface.

23. (New) The device of claim 22 wherein the signals are analog signals.

24. (New) The device of claim 22 wherein the non-voice signals comprises dual tone multi-frequency (DTMF) signals.

25. (New) The device of claim 22 wherein the at least one network interface comprises a data modem.

26. (New) The device of claim 22 wherein the at least one network interface is capable of communication using an Internet protocol.

27. (New) The device of claim 26 wherein the Internet protocol comprises the transport control protocol (TCP)/Internet protocol.

28. (New) The device of claim 22 wherein the host device is a personal computer.

29. (New) The device of claim 22 further comprising:

processing circuitry capable of converting analog representations of voice signals to digital representations of voice signals, and converting digital representations of voice signals to analog representations of voice signals.

30. (New) The device of claim 29 wherein the converting digital representations of voice signals to analog representations of voice signals comprises buffering the digital representations for a period of time in order to minimize gaps in the resulting analog representation caused by changes in a propagation delay.

31. (New) The device of claim 29 wherein converting analog representations of voice signals to digital representations of voice signals comprises:

determining voice activity based upon voice signals from the first telephony device;
reducing the quantity of information transmitted via the at least one network interface, if voice activity is determined to be below a predetermined level; and
refraining from reducing the quantity of information transmitted via the at least one network interface, if voice activity is determined not to be below the predetermined level.

32. (New) The device of claim 22 wherein the operational software is at least capable of:

receiving a voice call setup request from the first telephony device, the request comprising a destination address;

identifying predefined call route information in the database, using at least the destination address;

automatically establishing voice communication between the first telephony device and a second telephony device using the predefined call route information, if predefined call route information is identified; and

requesting call route information from a user of the first telephony device, if predefined call route information is not identified.

33. (New) The device of claim 32 wherein the requesting comprises:
delivering to the user of the first telephony device a voice message; and
receiving from the user of the first telephony device call route information.

34. (New) The device of claim 32 wherein the operation software is capable of:
establishing voice communication between the first telephony device and the second telephony device based upon the call route information from a user of the first telephony device, if predefined call route information is not identified.

35. (New) The device of claim 32 wherein the automatically establishing comprises:
establishing a conventional telephone call for the exchange of voice signals between the first telephony device and the second telephony device, if the identified predefined call routing information indicates routing of the call via a conventional telephone switching network.

36. (New) The device of claim 32 wherein the automatically establishing comprises:
establishing an Internet connection via one of a conventional telephone switching network circuit and a dedicated telephone circuit for the exchange of packetized voice, if the identified predefined call routing information indicates routing of the call via the Internet.

37. (New) The device of claim 32 wherein the automatically establishing comprises:
establishing a packet network connection via at least one of a premises network and a local area network for the exchange of packetized voice, if the identified predefined call routing information indicates routing of the call via an internal route.

38. (New) A method of operating a voice communication system supporting selective call routing, the method comprising:

receiving a voice call setup request from a first telephony device, the request comprising a destination address;

identifying predefined call route information using at least the destination address;

automatically establishing voice communication between the first telephony device and a second telephony device using the predefined call route information, if predefined call route information is identified; and

requesting call route information from a user of the first telephony device, if predefined call route information is not identified.

39. (New) The method of claim 38 wherein the first telephony device is a conventional telephone.

40. (New) The method of claim 38 wherein the destination address comprises a conventional telephone number.

41. (New) The method of claim 38 wherein identifying comprises:

locating in a database, predefined call route information corresponding to the destination address, the database comprising at least one entry associating predefined call route information with at least one destination address.

42. (New) The method of claim 38 wherein requesting comprises:

delivering to the user of the first telephony device a voice message; and
receiving from the user of the first telephony device call route information.

43. (New) The method of claim 38 further comprising:

establishing voice communication between the first telephony device and the second telephony device based upon the call route information from a user of the first telephony device, if predefined call route information is not identified.

44. (New) The method of claim 38 wherein automatically establishing comprises:
establishing a conventional telephone call for the exchange of voice signals between the first telephony device and the second telephony device, if the identified predefined call routing information indicates routing of the call via a conventional telephone switching network.

45. (New) The method of claim 38 wherein automatically establishing comprises:
establishing an Internet connection via one of a conventional telephone switching network circuit and a dedicated telephone circuit for the exchange of packetized voice, if the identified predefined call routing information indicates routing of the call via the Internet.

46. (New) The method of claim 38 wherein automatically establishing comprises:
establishing a packet network connection via at least one of a premises network and a local area network for the exchange of packetized voice, if the identified predefined call routing information indicates routing of the call via an internal route.

47. (New) The method of claim 38 wherein the call routing information from a user is associated with the destination address and stored, to form a database of routing information.

48. (New) A machine-readable storage, having stored thereon a computer program having a plurality of code sections for implementing a call routing system, the code sections executable by a machine for causing the machine to perform the operations comprising:

receiving a voice call setup request from a first telephony device, the request comprising a destination address;

identifying predefined call route information using at least the destination address;

automatically establishing voice communication between the first telephony device and a second telephony device using the predefined call route information, if predefined call route information is identified; and

requesting call route information from a user of the first telephony device, if predefined call route information is not identified.

49. (New) The machine-readable storage of claim 48 wherein the first telephony device is a conventional telephone.

50. (New) The machine-readable storage of claim 48 wherein the destination address comprises a conventional telephone number.

51. (New) The machine-readable storage of claim 48 wherein identifying comprises: locating in a database, predefined call route information corresponding to the destination address, the database comprising at least one entry associating predefined call route information with at least one destination address.

52. (New) The machine-readable storage of claim 48 wherein requesting comprises: delivering to the user of the first telephony device a voice message; and receiving from the user of the first telephony device call route information.

53. (New) The machine-readable storage of claim 48 further comprising: establishing voice communication between the first telephony device and the second telephony device based upon the call route information from a user of the first telephony device, if predefined call route information is not identified.

54. (New) The machine-readable storage of claim 48 wherein automatically establishing comprises:

establishing a conventional telephone call for the exchange of voice signals between the first telephony device and the second telephony device, if the identified predefined call routing information indicates routing of the call via a conventional telephone switching network.

55. (New) The machine-readable storage of claim 48 wherein automatically establishing comprises:

establishing an Internet connection via one of a conventional telephone switching network circuit and a dedicated telephone circuit for the exchange of packetized voice, if the identified predefined call routing information indicates routing of the call via the Internet.

56. (New) The machine-readable storage of claim 48 wherein automatically establishing comprises:

establishing a packet network connection via at least one of a premises network and a local area network for the exchange of packetized voice, if the identified predefined call routing information indicates routing of the call via an internal route.

57. (New) The machine-readable storage of claim 48 wherein the call routing information from a user is associated with the destination address and stored, to form a database of routing information.